

Western Highland Rim Forests

Conservation Opportunity Area



Much of the Western Highland Rim of middle Tennessee is dominated by Southern Dry Oak and mixed mesophytic forests, representing the largest remaining contiguous forest habitat region in not only middle Tennessee, but also the larger Central Hardwoods forest region extending north through Kentucky and into southern Illinois, Indiana, and Ohio. Much of the land is held in private ownership, and in the past decades large acreages of hardwoods have been converted to industrial pine plantations. Other habitats, including remnant barrens and prairies, headwaters springs, and streams and rivers, are also important components of Western Highland Rim ecosystems.

Major threats to the contiguous forests and other habitats of the Western Highland Rim are reduction of these habitats due to timber harvests and habitat alteration due to incompatible forestry practices. These forests support a large diversity of breeding birds that include Cerulean Warbler, Red-headed Woodpecker, Acadian Flycatcher, and Yellow-billed Cuckoo.

Intact forests also help to maintain water quality, protecting diverse habitats for freshwater animals, including the Hellbender, Birdwing Pearlymussel, Coppercheek Darter and Slackwater Darter. The largest and possibly last remaining reproductive population of Eastern Hellbenders in middle Tennessee is located in the Buffalo River system, primarily the Little Buffalo River. Future work will determine what the key limiting factors are for this species and if populations can be restored through propagation and reintroduction.

Public Lands within the COA

Autney Hollow State Natural Area (SNA), Beaver Dam Creek Wildlife Management Area (WMA), Buffalo River State Scenic River (SSR), Cheatham Lake WMA, Cheatham WMA, David Crockett State Park (SP), Devil's Backbone SNA, Dry Branch SNA, Dyson Ditch Refuge, Eagle Creek WMA, Happy Hollow WMA, Harpeth River SP/SSR, Hick Hill WMA, Langford Branch SNA, Laurel Hill WMA, Lewis State Forest, Middle Tennessee State Univ. WMA, Montgomery Bell SP/SNA, Mound Bottom State Archeological Area, Narrows of the Harpeth State Historical Area (SHA), Natchez Trace Parkway, Newsomes Mill SHA, Pardue Pond Refuge, Stillhouse Hollow Falls SNA, Tie Camp WMA, Williamsport WMA



Southern dry oak and mesic forests predominate on the Western Highland Rim, which has the largest remaining contiguous forest in middle Tennessee.

Photos: Cerulean Warbler - Ed Schneider/next page: Red-headed Woodpecker - Allen Sparks; Harpeth River State Park - Mark Spangler

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Partnerships

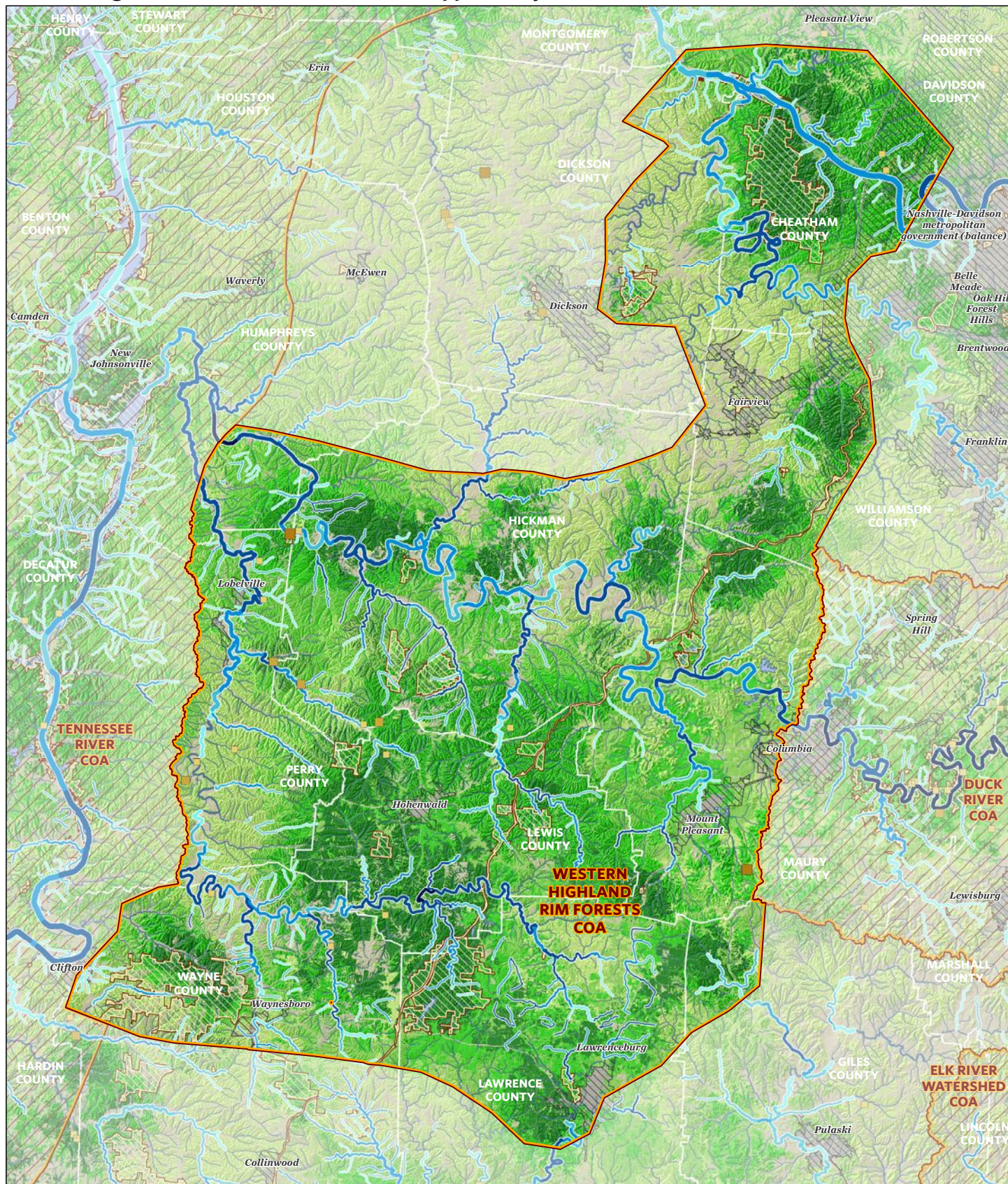
TWRA management strategies will focus on protecting or improving forest health, the quality and quantity of forested habitat, and the freshwater resources within this COA. TWRA will develop and expand partnerships with the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, U.S. Army Corps of Engineers, Tennessee Dept. of Forestry, Tennessee Dept. of Environment and Conservation, The Nature Conservancy, Partners in Flight, the Central Hardwoods Joint Venture, Tennessee Historical Society, Tennessee Bat Working Group, and Tennessee, universities, and private landowners.



	Desired Change	Units
+	Increase restoration of critical land units and aquatic resources through Best Management Practices on private lands using government-funded incentive programs	number
+	Increase acres of fire-dependent grasslands and forest managed with prescribed fire.	acres
+	Restore riparian buffers and physical stream habitat in priority locations throughout the watershed.	miles
+	Increase understanding of geographical distribution, life history, and ecological needs of target species to improve management aimed at promoting survival over the long-term.	projects
+	Increase knowledge of the status of important habitats and wildlife species through monitoring.	projects
+	Increase acres of habitat under permanent conservation management to benefit GCN species.	acres
✓	Develop and/or participate in regional conservation planning initiatives sponsored by federal, state, and local agencies.	plans
+	Improve forest habitat through development of new forestry Best Management Practice standards	assists



To learn more about the Western Highland Rim Forests Conservation Opportunity Area, please contact: Josh Campbell, Wildlife Diversity Coordinator, Region 2 (615) 781-6626

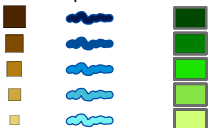


0 5 10
Miles

**Habitat
Priority**

Very High
High
Medium
Low
Very Low

Karst Aquatic Terrestrial



Conservation Opportunity Area
Protected Land



The Nature Conservancy
Protecting nature. Preserving life.

	WESTERN HIGHLAND RIM FORESTS COA GCN SPECIES (TN)
Taxa Group	Scientific & Common names
Amphibian	Cryptobranchus alleganiensis (Hellbender)
Amphibian	Necturus maculosus (Mudpuppy)
Amphibian	Siren intermedia (Lesser Siren)
Bat	Myotis grisescens (Gray Bat)
Bat	Myotis lucifugus (Little Brown Bat)
Bat	Myotis septentrionalis (Northern Myotis)
Bat	Myotis sodalis (Indiana Bat)
Bat	Perimyotis subflavus (Tri-colored Bat)
Bird	Accipiter striatus (Sharp-shinned Hawk)
Bird	Ammodramus henslowii (Henslow's Sparrow)
Bird	Ammodramus leconteii (LeConte's Sparrow)
Bird	Ammodramus savannarum (Grasshopper Sparrow)
Bird	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Asio flammeus (Short-eared Owl)
Bird	Bartramia longicauda (Upland Sandpiper)
Bird	Botaurus lentiginosus (American Bittern)
Bird	Calidris himantopus (Stilt Sandpiper)
Bird	Calidris mauri (Western Sandpiper)
Bird	Calidris pusilla (Semipalmated Sandpiper)
Bird	Caprimulgus carolinensis (Chuck-will's-widow)
Bird	Caprimulgus vociferus (Whip-poor-will)
Bird	Cardellina canadensis (Canada Warbler)
Bird	Chaetura pelagica (Chimney Swift)
Bird	Chordeiles minor (Common Nighthawk)
Bird	Circus cyaneus (Northern Harrier)
Bird	Cistothorus platensis (Sedge Wren)
Bird	Colinus virginianus (Northern Bobwhite)
Bird	Egretta caerulea (Little Blue Heron)
Bird	Empidonax minimus (Least Flycatcher)
Bird	Empidonax traillii (Willow Flycatcher)
Bird	Euphagus carolinus (Rusty Blackbird)
Bird	Falco peregrinus (Peregrine Falcon)
Bird	Geothlypis Formosa (Kentucky Warbler)
Bird	Grus americana (Whooping Crane)
Bird	Haliaeetus leucocephalus (Bald Eagle)
Bird	Helmitheros vermivorum (Worm-eating Warbler)
Bird	Hylocichla mustelina (Wood Thrush)
Bird	Icteria virens (Yellow-breasted Chat)
Bird	Icterus spurius (Orchard Oriole)
Bird	Ictinia mississippiensis (Mississippi Kite)
Bird	Ixobrychus exilis (Least Bittern)
Bird	Lanius ludovicianus (Loggerhead Shrike)
Bird	Limnothlypis swainsonii (Swainson's Warbler)
Bird	Melanerpes erythrocephalus (Red-headed Woodpecker)
Bird	Nycticorax nycticorax (Black-crowned Night-heron)
Bird	Parkesia motacilla (Louisiana Waterthrush)
Bird	Peucaea aestivalis (Bachman's Sparrow)
Bird	Protonotaria citrea (Prothonotary Warbler)
Bird	Riparia riparia (Bank Swallow)
Bird	Scolopax minor (American Woodcock)
Bird	Setophaga cerulea (Cerulean Warbler)
Bird	Setophaga discolor (Prairie Warbler)

WESTERN HIGHLAND RIM FORESTS COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Bird	Setophaga fusca (Blackburnian Warbler)
Bird	Sturnella magna (Eastern Meadowlark)
Bird	Tryngites subruficollis (Buff-breasted Sandpiper)
Bird	Tyto alba (Barn Owl)
Bird	Vermivora chrysoptera (Golden-winged Warbler)
Bird	Vermivora cyanoptera (Blue-winged Warbler)
Bivalve	Cumberlandia monodonta (Spectaclecase)
Bivalve	Lasmigona complanata complanata (White Heelsplitter)
Bivalve	Ligumia recta (Black Sandshell)
Bivalve	Medionidus conradicus (Cumberland Moccasinshell)
Bivalve	Obovaria subrotunda (Round Hickorynut)
Bivalve	Pleurobema clava (Clubshell)
Bivalve	Pleurobema cordatum (Ohio Pigtoe)
Bivalve	Pleurobema rubrum (Pyramid Pigtoe)
Bivalve	Pleuronaia barnesiana (Tennessee Pigtoe)
Bivalve	Pleuronaia dolabelloides (Slabside Pearlymussel)
Bivalve	Quadrula cylindrica cylindrica (Rabbitsfoot)
Bivalve	Simpsonaias ambigua (Salamander Mussel)
Bivalve	Toxolasma lividum (Purple Lilliput)
Bivalve	Villosa taeniata (Painted Creekshell)
Bivalve	Villosa vanuxemensis (Mountain Creekshell)
Fish	Acipenser fulvescens (Lake Sturgeon)
Fish	Carpiodes velifer (Highfin Carpsucker)
Fish	Cycleptus elongatus (Blue sucker)
Fish	Erimonax monachus (Spotfin Chub)
Fish	Erimystax dissimilis (Streamline Chub)
Fish	Erimystax insignis (Blotched Chub)
Fish	Etheostoma aquali (Coppercheek Darter)
Fish	Etheostoma boschungii (Slackwater Darter)
Fish	Etheostoma cinereum (Ashy Darter)
Fish	Etheostoma denoncourti (Golden Darter)
Fish	Etheostoma luteovinctum (Redband Darter)
Fish	Etheostoma microlepidum (Smallscale Darter)
Fish	Etheostoma pseudovulatum (Egg-mimic Darter)
Fish	Etheostoma striatulum (Striated Darter)
Fish	Etheostoma tippecanoe (Tippecanoe Darter)
Fish	Hemitremia flammea (Flame Chub)
Fish	Ichthyomyzon unicuspis (Silver Lamprey)
Fish	Notropis asperifrons (Burrhead Shiner)
Fish	Notropis rubellus (Rosyface Shiner)
Fish	Noturus fasciatus (Saddled Madtom)
Fish	Noturus stanauli (Pygmy Madtom)
Fish	Percina burtoni (Blotchside Logperch)
Fish	Percina phoxocephala (Slenderhead Darter)
Insect	Ophiogomphus acuminatus (Acuminate Snaketail)
Mammal	Neotoma magister (Allegheny Woodrat)
Mammal	Spilogale putorius (Eastern Spotted Skunk)
Plant	Acalypha deamii (Deam's Copperleaf)
Plant	Allium burdickii (Narrow-leaf Ramps)
Plant	Amsonia tabernaemontana var. gattingeri (Limestone Blue Star)
Plant	Apios priceana (Price's Potato-bean)
Plant	Carex hirtifolia (Pubescent Sedge)
Plant	Castanea dentata (American Chestnut)

WESTERN HIGHLAND RIM FORESTS COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Plant	Cerastium velutinum var. velutinum (Velvety Cerastium)
Plant	Elymus svensonii (Svenson's Wild-rye)
Plant	Erythronium rostratum (Beaked Trout-lily)
Plant	Hasteola suaveolens (Sweet-scented Indian-plantain)
Plant	Helianthus eggertii (Eggert's Sunflower)
Plant	Juglans cinerea (Butternut)
Plant	Juncus brachycephalus (Small-headed Rush)
Plant	Lilium canadense (Canada Lily)
Plant	Lilium michiganense (Michigan Lily)
Plant	Liparis loeselii (Fen Orchid)
Plant	Lonicera flava (Yellow Honeysuckle)
Plant	Lonicera prolifera (Grape Honeysuckle)
Plant	Marshallia trinervia (Broad-leaved Barbara's-buttons)
Plant	Melanthium latifolium (Broadleaf Bunchflower)
Plant	Melanthium woodii (Ozark Bunchflower)
Plant	Minuartia godfreyi (Godfrey's Stitchwort)
Plant	Panax quinquefolius (American Ginseng)
Plant	Parnassia grandifolia (Large-leaved Grass-of-parnassus)
Plant	Paysonia densipila (Duck River Bladderpod)
Plant	Phlox pilosa ssp. ozarkana (Ozark Downy Phlox)
Plant	Physaria globosa (Short's Bladderpod)
Plant	Prenanthes crepidinea (Nodding Rattlesnake-root)
Plant	Stellaria fontinalis (Water Stitchwort)
Reptile	Anolis carolinensis (Green Anole)
Reptile	Crotalus horridus (Timber Rattlesnake)
Reptile	Heterodon platirhinos (Eastern Hognosed Snake)
Reptile	Terrapene carolina (Eastern Box Turtle)
Reptile	Virginia striatula (Rough Earth Snake)
Subterranean - Arachnid	Hesperochernes mirabilis (Southeastern Cave Pseudoscorpion)
Subterranean - Arachnid	Macrocheles sp. 3 (mite)
Subterranean - Arachnid	Phanetta subterranea (Subterranean sheet-web spider)
Subterranean - Crustacean	Caecidotea bicrenata ((a cave obligate isopod))
Subterranean - Crustacean	Cambarus tenebrosus (Cavespring Crayfish)
Subterranean - Crustacean	Crangonyx antennatus (Appalachian cave amphipod)
Subterranean - Crustacean	Gammarus minus (Lesser spring amphipod)
Subterranean - Crustacean	Stygobromus exilis (Central Kentucky Cave Obligate)
Subterranean - Fish	Typhlichthys subterraneus (Southern Cavefish)
Subterranean - Flatworm	Cambarincola leptadenus ((a cave obligate roundworm))
Subterranean - Gastropod	Helicodiscus barri (Raccoon Coil)
Subterranean - Insect	Batriasymmodes quisnamus ((a cave obligate beetle))
Subterranean - Insect	Batrisodes ferulifer ((a cave obligate beetle))
Subterranean - Insect	Folsomia candida (springtail)
Subterranean - Insect	Litocampa cookei (Cooke's Cave Dipluran)
Subterranean - Insect	Platynus tenuicollis (ground beetle)
Subterranean - Insect	Pseudanophthalmus bendermani (Benderman's Cave Beetle)
Subterranean - Insect	Pseudanophthalmus hesperus ((a cave obligate beetle))
Subterranean - Insect	Pseudanophthalmus occidentalis (Western Cave Beetle)
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Insect	Psyllipsocus ramburi ((a cave barklice))
Subterranean - Insect	Sinella cavernarum ((a springtail))
Subterranean - Insect	Tomocerus bidentatus (Two-toothed springtail)
Subterranean - Insect	Typhlogastrura christianseni (Christiansen's cave springtail)
Subterranean - Insect	Undetermined species (sepsid Black scavenger fly)

WESTERN HIGHLAND RIM FORESTS COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Subterranean - Millipede	Chaetaspis debilis ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes hesperus ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes musicarustica ((a cave obligate millipede))

WESTERN HIGHLAND RIM FORESTS COA HABITATS (TN)	
Terrestrial Habitat Type	Total acres of very high, high, and medium ranked habitat
Natural habitats	
Southern Interior Low Plateau Dry-Mesic Oak Forest	320738
South-Central Interior Mesophytic Forest	307417
South-Central Interior Small Stream and Riparian	3690
South-Central Interior Large Floodplain	2622
Southern Appalachian Low-Elevation Pine Forest	1666
Central Interior Calcareous Cliff and Talus	231
Semi-natural habitats	
Pasture	82015
Old Field / Successional	26541
Cropland	24353
Forest Plantation	93
Aquatic Habitat Type	Total stream miles of very high, high, and medium ranked habitat
Headwaters and Streams	313
Small River	148
Medium River	143
Large River	22